

Work Order ID 69674

Monday, May 16, 2011 9:27:45 AM



Page 1

Item ID: D350-591-312

Accept



Setup Start



Revision ID:

Stop



Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 10.00

Customer:

Reference:

Approvals: Process Plan: CL Date: 11/05/16 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3272	Rev B
-------	-------

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

Sub 6667

110

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg

D3272

A/R Aluminum Rod

M114703
M115928

3-Grind End Plate flush

11.05.1810 φ

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

11.05.24 (10)

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 11/05/24

x10 RH

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

10XRH M-1 11/05/24

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							
180 Large Fab Large Fab	Large Fab Memo 1-Assemble Leg Assembly as per Dwg D3272. 2-Leave one rivet out until welding is complete. 3-Bevel Aft end for welding 4-Inspect for foreign object as per QSI 024 5-Weld Aft End Plate as per QSI 004 & Dwg D3272 A/R <input type="checkbox"/> Aluminum Rod <input checked="" type="checkbox"/> M114703 6-Grind End Plate flush 7-Install last rivet as per Dwg.	0.00 0.00							

11.05.25 10 0

11.05.27 10 0

AE 11.05.27

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00							
200 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
210 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							

8 ulos/30

8 ulos/30

x10

RM

10 BR 11-5-80.

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

START TIME:

8:30

0.00

OVEN TEMPERATURE:

320 °F

FINISH TIME:

9:00

10X ~~φ~~ M/ 11/05/31
RH

Powder Coating

M116964

230

Wing Walk as per dwg QSI005 4.4 Batch

0.00



HandFinish

Memo

M 117315

0.00

10 ~~φ~~ 11-5-31

Hand Finishing

240

QC3- Inspect Part Finish

0.00



QC

Memo

10 RH ~~φ~~ 11/05/31

Quality Control

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 Packaging Packaging	Pick Kit Memo	0.00 0.00							<u>11/6/25</u> <u>10</u>
260 QC Quality Control	QC4- 100% Inspect kits for completeness Memo	0.00 0.00							<u>410</u> <u>RH</u>
270 Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPPD350-591-312 Location: _____	0.00 0.00							<u>11/6/7</u> <u>SD</u> <u>10</u>

Reob

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Start Date: 5/16/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									




11/6/8
CL11106107

Monday, May 16, 2011 9:27:42 AM

Page 1

Required Qty: 10.00

fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3272-1 		Manufactured	No			110	Each	20.0000	1	10		11.05.16	
Step													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				20					
					67709			10					
					<u>69294</u>			10		10			
D3067-1 		Manufactured	No			110	Each	155.0000	1	10		11.05.17	
End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				5					
					67582			5					
				WA016				150					
					<u>68214</u>			150		10			
D3219-1 		Manufactured	No			110	Each	204.0000	2	20		11.05.17	
Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				84					
					<u>68202</u>			84		20			
				WA017				120					
					68338			120					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist-Print

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Work Order ID: 69674



Parent Item: D350-591-312



Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 10.00

Required Qty: 10.00

D3066-1 Manufactured No

180 Each

88.0000

2

20



Spacer



11.05.25

Location

Loc Qty

Loc Code

WA

88

68337

88

20

MS20600-AD4W4

Purchased No

180 Each

1,808.000

16

160



Rivets



11.05.26

Location

Loc Qty

Loc Code

ST321

1803

116188

603

117364

1000

117601

200

WA018

5

116712

5

160

D3065-041

Manufactured No

180 Each

38.0000

1

10



Step Leg Assembly Hi



11.05.25

Location

Loc Qty

Loc Code

WA

38

66149

0

67503

38

10

D3067-1

Manufactured No

180 Each

155.0000

1

10



End Plate



11.05.26

Location

Loc Qty

Loc Code

WA

5

67582

5

WA016

150

68214

150

10

Picklist Print

Page 3

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Work Order ID: 69674

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 10.00

Required Qty: 10.00

AN3-35A

Purchased

No

250

Each

131.0000

2

20



Bolt

Location

Loc Qty

Loc Code

ST353

131

117313

31

117441

50

117619

50

D3235-1

Manufactured

No

250

Each

123.0000

2

20



Mounting Lug

Location

Loc Qty

Loc Code

ST471

123

67831

23

68292

100

D3278-041

Manufactured

No

250

Each

58.0000

1

10



Support Assembly

Location

Loc Qty

Loc Code

ST471

58

67584

18

68957

40

AN960JD416

NAS1149D0463J

Purchased

No

250

Each

0.0000

16

160



Washer

AN960JD516

NAS1149D0563J

Purchased

No

250

Each

0.0000

4

40



Washer

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Shop Packet Print

Page 3

Picklist Print

Monday, May 16, 2011 9:27:42 AM

Work Order ID: 69674

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 10.00

Required Qty: 10.00

AN5-36A

Purchased

No

250

Each

103.0000

2

20



Bolt

Location

Loc Qty

Loc Code

ST341

103

117366

103

Manufactured

No

250

Each

90.0000

2

20

D2618



Bushing

Location

Loc Qty

Loc Code

ST019

90

68249

90

Manufactured

No

250

Each

212.0000

4

40

D2230-3



Lug

Location

Loc Qty

Loc Code

Return 2010

4

62927

2

63544

2

ST476

208

65050

48

68246

160

Manufactured

No

250

f

179.2696

1.2

12

D2856-400



Abraison Strip

Location

Loc Qty

Loc Code

ST403

178.6

68076

178.6

ST409

0.6696

63735

0.6696

cut (2) D2856-400-720 as per dwg

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Shop Packet Print

Picklist Print

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Monday, May 16, 2011 9:27:42 AM

Work Order ID: 69674

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 10.00

Required Qty: 10.00

MS21042L3

Purchased

No

250

Each

2,247.000

2

20



Nut

Location

Loc Qty

Loc Code

ST300

2247

116391

11

116540

270

116549

766

117441

800

117601

400

AN4-13A

Purchased

No

250

Each

245.0000

8

80



Bolt

Location

Loc Qty

Loc Code

ST357

245

117628

245

MS21042L5

Purchased

No

250

Each

1,275.000

2

20



Nut

Location

Loc Qty

Loc Code

ST300

1275

116105

315

116548

260

117441

500

117591

100

117611

100

Picklist Print

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Monday, May 16, 2011 9:27:42 AM

Work Order ID: 69674



Parent Item: D350-591-312



Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 10.00

Required Qty: 10.00

MS21042L4

Purchased

No

250

Each

4,957.000

8

80



Nut

Location

Loc Qty

Loc Code

ST300

4957

114718

2

116823

1155

117441

3000

117601

800

AN960JD10

NAS1149D0363J

Purchased

No

250

Each

0.0000

4

40



Washer

80

80

M116583 11/6/25/10



DESIGN <i>QD</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07 06 04

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

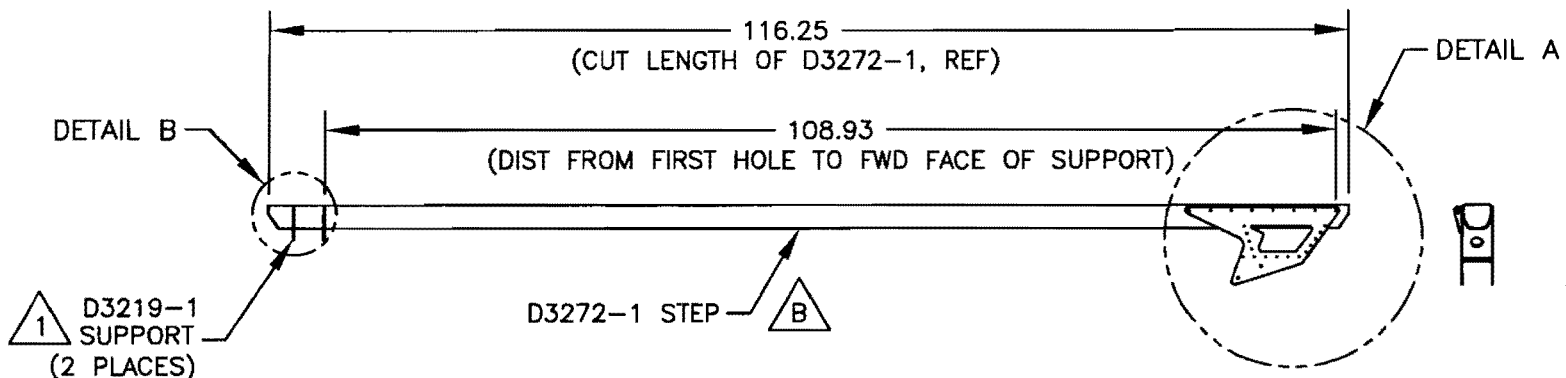
- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

CL 11/05/16

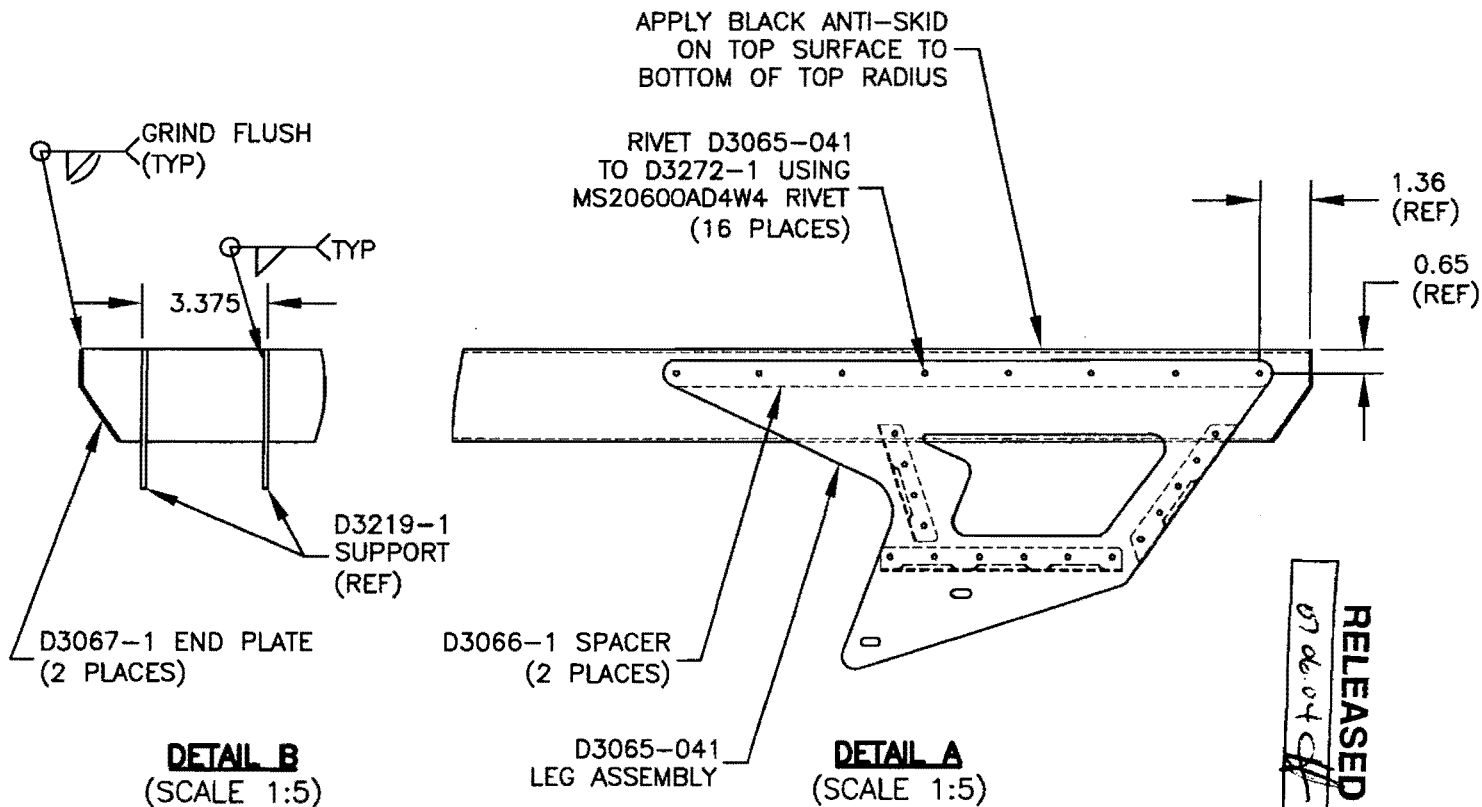
Wb: 69674

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D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



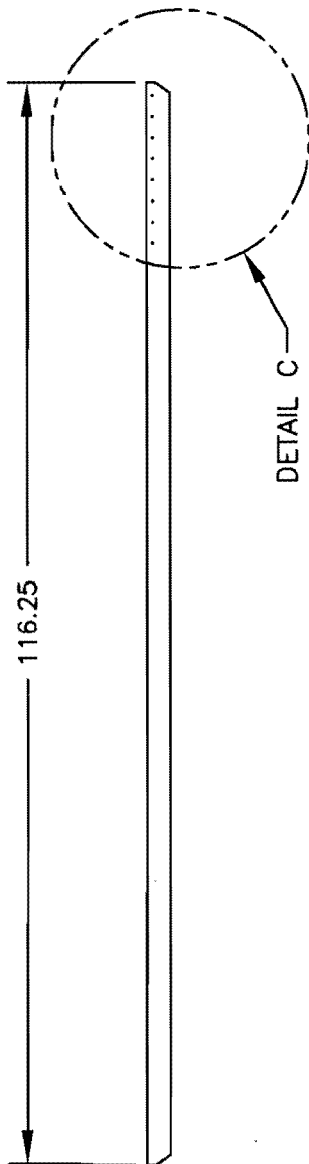
DESIGN 00	DRAWN BY [Signature]	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. B
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3272	SHEET 2 OF 3
DATE 07.05.18	TITLE STEP ASSEMBLY, HI LONG	SCALE 1:20	



DESIGN <i>qp</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272	REV. B SHEET 3 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE 1:20

RELEASED

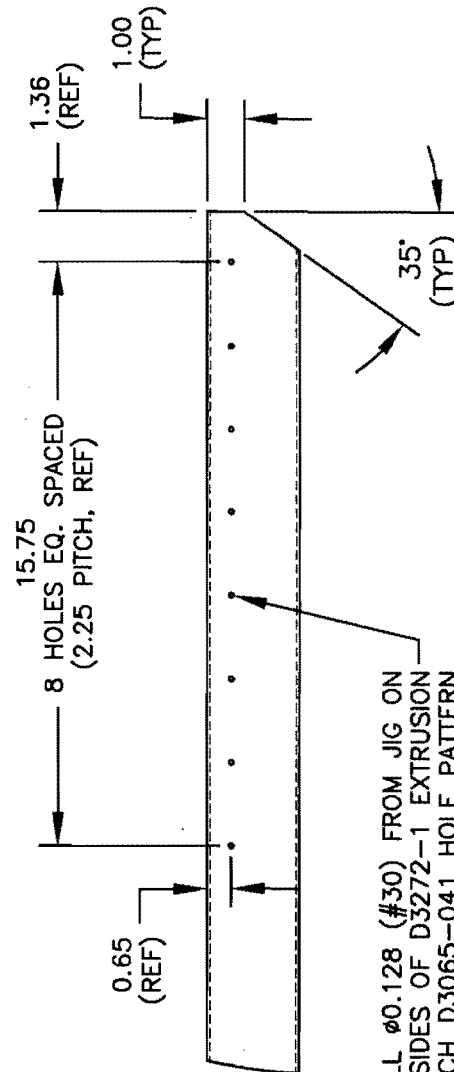
07.06.04 *[Signature]*



DETAIL C

B D3272-1 STEP

(MAKE FROM D2622-120 STEP EXTRUSION)



DETAIL C
(SCALE 1:5)

DRILL $\phi 0.128$ (#30) FROM JIG ON
BOTH SIDES OF D3272-1 EXTRUSION
TO MATCH D3065-041 HOLE PATTERN

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Qty -211	Qty -212	Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X								D350-591-211	<i>Heli-Access-Step</i> ™, Long Step – High Skid, LH
	X							D350-591-212	<i>Heli-Access-Step</i> ™, Long Step – High Skid, RH
		X						D350-591-213	<i>Heli-Access-Step</i> ™, Short Step – High Skid, LH
			X					D350-591-214	<i>Heli-Access-Step</i> ™, Short Step – High Skid, RH
				X				D350-591-215	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, LH
					X			D350-591-216	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, RH
						X		D350-591-311	<i>Heli-Access-Step</i> ™, Long Step – High Skid, LH
							X	D350-591-312	<i>Heli-Access-Step</i> ™, Long Step – High Skid, RH
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
			1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		2	2	2	2			D2230-1	MOUNTING LUG
		2	2	2	2	4	4	D2230-3	MOUNTING LUG
8	8							D2274	RADIUS BLOCK
						2	2	D2618	BUSHING
4	4	4	4	4	4			D2732-030	CUSHION
2	2	1	1	1	1	2	2	D2856-400-720	ABRASION STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4							D3080-1	CLAMP
						2	2	D3235-1	MOUNTING LUG
						1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	2	2	AN3-35A	BOLT
10	10	2	2	2	2			AN4-11A	BOLT
		4	4	4	4		8	AN4-13A	BOLT
						2	2	AN5-36A	BOLT
4	4	4	4	4	4	4	4	AN960JD10	WASHER
20	20	12	12	12	12	16	16	AN960JD416	WASHER
						4	4	AN960JD516	WASHER
2	2	2	2	2	2	2	2	MS21042L3	NUT
10	10	6	6	6	6	8	8	MS21042L4	NUT
						2	2	MS21042L5	NUT
						1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.